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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/780,976	02/09/2001	Martin Czech	Micronas.5903	2248

7590

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EXAMINER

LOKE, STEVEN HO YIN

ART UNIT

PAPER NUMBER

2811

DATE MAILED: 03/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/780,976

Applicant(s)

CZECH ET AL.

Examiner

Steven Loke

Art Unit

2811

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 26 December 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

1. Claims 1-6 and 8-12 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Fig. 4 discloses a third strongly doped region [24] of the second conduction type, which is introduced into the well region [21], is electrically connected to the second terminal [27], and is spatially arranged between the first strongly doped region [22] and the p+ type region [31]. Fig. 4 also discloses a third strongly doped region [24'] of the second conduction type, which is introduced into the well region [21'], is electrically connected to the second terminal [27'], and is spatially arranged between the first strongly doped region [22] and the p+ type region [31]. The specification never discloses a third strongly doped region [24] of the second conduction type, which is introduced into the well region [21], is electrically connected to the second terminal [27], and is spatially arranged between the first strongly doped region [22] and the second strongly doped region [23] as claimed in claim 1. The specification also never discloses a third strongly doped region [24'] of the second conduction type, which is introduced into the well region [21'], is electrically connected to the second terminal [27'], and is spatially arranged between the first strongly doped region [22] and the second strongly doped region [23'] as claimed in claim 1.

Fig. 7 discloses an unsymmetrical lateral thyristor comprising a region [41] of the second conduction type, and including a terminal [40] that is introduced into a field oxide region [30], wherein the terminal [40] is connected to a circuit that is being protected.

The specification never discloses the device of fig. 7 can be combined with the device of fig. 4. Therefore, the specification never discloses the lateral thyristor structure of claim 1 further comprising a region of the second conduction type, and including a terminal that is introduced into a field oxide region, wherein the terminal is connected to a circuit that is being protected as claimed in claim 6.

Fig. 4 discloses a symmetrical lateral thyristor structure having a second strongly doped region [23] of the first conduction type that is introduced into the well region [21] and is electrically connected to a second terminal [27] and a third strongly doped region [24] of the second conduction type, which is introduced into the well region [21], is electrically connected to the second terminal [27], and is spatially arranged between the first strongly doped region [22] and the p+ type region [31]. The specification never discloses a symmetrical lateral thyristor structure having a second strongly doped region of the second conduction type that is introduced into the well region [21] and is electrically connected to a second terminal [27] and a third strongly doped region [24] of the second conduction type, which is introduced into the well region [21], is electrically connected to the second terminal [27], and is spatially arranged between the first strongly doped region [22] and the second strongly doped region [23] as claimed in claim 12. The specification also never discloses a symmetrical lateral thyristor structure having a second strongly doped region of the second conduction type that is introduced into the well region [21'] and is electrically connected to a second terminal [27'] and a third strongly doped region [24'] of the second conduction type, which is introduced into the well region [21'], is electrically connected to the second terminal [27'], and is

spatially arranged between the first strongly doped region [22] and the second strongly doped region [23'] as claimed in claim 12.

2. Claims 9-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9, line 2, claim 10, lines 2-3, claim 11, lines 2-3, the phrase "said doped regions" is unclear as to which doped regions is it being referred to. There are seven different doped regions in the lateral thyristor structure of claim 1.

Claim 9, line 3, the phrase "said active region" has no antecedent basis.

Claim 9, line 3, the phrase "said substrate contacting ring is removed as far as possible from said active region" is unclear. Fig. 4 discloses the substrate contacting ring [31] is spaced away from the doped regions [22, 25, 23, 24, 25', 23', 24']. It is believed that the substrate contacting ring is spaced away from the doped regions as claimed in claim 9.

Claim 10, lines 2-3, claim 11, line 3, the phrase "said substrate contacting ring is removed as far as possible from said doped regions" is unclear. Fig. 4 discloses the substrate contacting ring [31] is spaced away from the doped regions [22, 25, 23, 24, 25', 23', 24']. It is believed that the substrate contacting ring is spaced away from the doped regions as claimed in claims 10 and 11.

Claim 11, line 1, the phrase "said least two lateral thyristors" is unclear whether it is being referred to said at least two lateral thyristors.

3. Applicant's arguments with respect to claims 1-6 and 9-12 have been considered but are moot in view of the new ground(s) of rejection.

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Loke whose telephone number is (703) 308-4920. The examiner can normally be reached on 7:50 am to 5:20 pm.

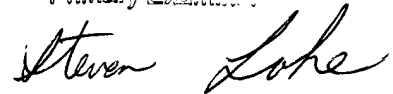
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (703) 308-2772. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

sl
March 8, 2003

Steven Loh
Primary Examiner

A handwritten signature in cursive script that reads "Steven Loh".